



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,164	07/25/2005	Hermanus Carolus Catherina Karel Bakel Van	101384-1 US	2743
9629 7590 07/27/2007 MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			EXAMINER OH, TAYLOR V	
			ART UNIT 1625	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/518,164	BAKEL VAN ET AL.	
	Examiner	Art Unit	
	Taylor Victor Oh	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1625

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

The Status of Claims

Claims 1-11 are pending.

Claims 1-11 are rejected.

DETAILED ACTION

1. In the preliminary amendment, claims 1-11 are under consideration in this Office Action.

Priority

2. It is noted that this application is a 371 of PCT/NL03/00435 filed on 06/12/2003, which has a foreign priority document, EP-02100715.8 filed on 06/17/2002.

Drawings

3. None.

Claim Rejections - 35 USC § 103

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim

Art Unit: 1625

that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

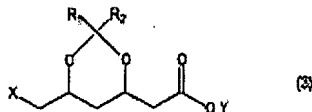
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kooistra et al (WO 02/06266 A1).

Kooistra et al discloses the process for preparing 2-(6-substituted-1,3-dioxane-4-yl) acetic acid derivatives in the following description.

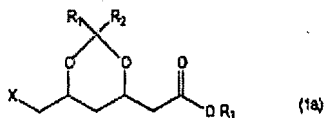
Art Unit: 1625

The salts (acids) obtained are novel. The invention therefore
 5 also relates to these products of formula 3



where X stands for a halogen, in particular Cl, Br or I, a tosylate or mesylate
 10 group, an acyloxy group with 3-10 carbon atoms, or a nitro-substituted benzene
 sulphonyl group and Y stands for H, an alkaline (earth) metal, or a substituted or
 unsubstituted ammonium group.

The resulting salt of formula 3 can subsequently be converted
 into the corresponding t-butyl ester (formula 1a with R₂ = t-butyl), in a way known
 15 per se.



In the process according to the invention the compound of
 formula (3) can for example be esterified to form the corresponding tert. butyl
 ester using the following methods, which in general are described in literature:

(see page 5 , lines 5-20)

reaction of the acid with pivaloyl chloride and t-butanol under the
 influence of DMAP or N-methyl-morpholin (NMM) (Bull. Chem. Soc. Japan 52 (7)
 1989 (1979));

(see page 6 , lines 15-17)

The resulting t-butyl ester of 2-(6-substituted-1,3-dioxane-4-
 yl)acetic acid can subsequently be converted into the 2-(6-hydroxymethyl-
 1,3-dioxane-4-yl)acetic acid, for example as described in US-A-5594153 or in
 EP-A-1024138, in the presence of a tetraalkyl ammonium halogenide and/or a
 carboxylic acid in the salt, via conversion into a compound of formula 1a with
 R₂ = t-butyl and X = an acyloxy, for example an acetoxy group. The acyloxy group
 can subsequently be converted via solvolysis, in a way otherwise generally
 known, to a hydroxyl group. The solvolysis can be performed using a base
 (Na₂CO₃, K₂CO₃, or sodium methanolate in methanol), optionally by simultaneous
 distillation of the methyl acetate formed.

(see page 6 ,lines 22-31).

However, the instant invention differs from the prior art in that claim 1 recites
 contacting the generated acid chloride with an alcohol in the presence of N-
 methylmorpholine.

Even so, the prior art expressly teaches the claimed ester of formula (1) can be obtained from the generated acid chloride intermediate with the alcohol in the followings:

reaction via the acid chloride and t-butanol, under the influence of a base, for example triethylamine (Et_3N), dimethylamino pyridine (DMAP). The acid chloride can be prepared with the aid of for example SOCl_2 , POCl_3 , $(\text{COCl})_2$

and catalyzed by for example dimethyl formamide (DMF) (J. Org. Chem. 35 2429 (1970));

(see from page 5 ,line 24 to page 6, line 2).


Kooistra et al does disclose the process for preparing 2-(6-substituted-1,3-dioxane-4-yl) acetic acid derivatives from the generated acid chloride intermediate with the alcohol; furthermore, it does offer guidance that the reaction can be conducted under the influence of either NMM (see page 6 , lines 15-17) or DMF (see page 6 , lines 1-2). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to use the NMM base as an alternative in order to perform the optimization process by routine experimentation. This is because the skilled artisan in the art would expect such a modification to be feasible and successful as guidance shown in the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

Art Unit: 1625

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Taylor Victor Oh, MSD, LAC
Primary Examiner
Art Unit : 1625

7/21/07